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Configurational analysis of environmental NGOs and their influence on environmental policy in Turkey

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Environmental non-governmental organizations (ENGOS) have emerged as important actors with regard to their interest in encouraging and supporting the dissemination of environmental policies. A key starting point in the examination of ENGOS and their influence on environmental policy is to highlight their decisions to affect policy processes as a means of achieving environmental protection. Hence, ENGOS need resources and it is equally important that they effectively employ those resources to achieve environmental policy influence. ENGO lobbying is a process in which different causal conditions interact with one another to affect environmental policy. However, minimal attention has been paid to how different conditions occurring together exert influence. This paper argues that it is the combined effect of resources and effective strategies that enables ENGOS to exert policy influence. Fuzzy-set qualitative comparative analysis is used to test the combined nature of different conditions. A dataset created in 2019 that includes 38 ENGOS from Turkey reveals that the combination of multiple interchangeable conditions leads to high ENGO policy influence. The findings suggest that advocacy effectiveness is achieved via two different causal paths. The first path entails having a large staff size, lobbying multiple venues, and using both inside and outside lobbying tactics, while the second involves large membership size, the use of both inside and outside lobbying, and lobbying multiple venues. This study suggests an alternative way of using the determinants of environmental policy influence and offers a new perspective for ENGO leaders to influence environmental policy.

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Introduction

There are many ways in which interest groups can influence policy-making processes. Interest groups such as environmental non-governmental organizations (ENGOS) resort to a range of strategies including direct contact with government officials, organizing press conferences, and preparing press releases to increase their influence. This makes them critically important actors in terms of their impact on environmental policy (Betzold, 2013). There are diverse factors explaining lobbying influence in the literature on interest groups. Researchers investigating ENGOS' policy influence have focused more on how ENGOS collectively shape environmental policies than comparisons of their relative influence. Influence in this context equates with effectiveness as described in the non-profit advocacy literature (e.g., Zhang and Guo, 2020). Unlike the literature on participation in advocacy, there is limited knowledge of the effectiveness of non-profit organizations' advocacy activities (Zhang and Guo, 2020). The literature on interest group influence, however, presents extensive information that allows us to build a framework to explain why some ENGOS are influential and others are not. Like other non-profit organizations, ENGOS can be conceptualized as interest groups or advocacy groups if they seek to influence policies (Halpin et al., 2020).

Limited research has focused on the effectiveness of advocacy efforts by non-profit organizations such as ENGOS. This paper aims to address that gap by using the interest group literature with an integrative framework to examine the determinants of the lobbying influence of ENGOS. Thus, the paper contributes to the literature in three distinct ways. First, it aims to compare ENGOS to investigate which factors explain the difference between those that are influential and those that are not. In doing so, this research expands the literature addressing whether ENGOS' efforts overall are influential and cause policy change (Arts and Mack, 2003; Ayana et al., 2018; Binder and Neumayer, 2005; Lati, 2008; Böhmelt and Betzold, 2013; Dai and Spire, 2018; Grano, 2012).

Second, this study uses an integrative framework by employing qualitative comparative analysis (QCA). It is based on causal complexity whereby multiple conditions conjuncturally and equifinally determine policy influence (Schneider and Wagemann, 2006; Ragin, 2008a). This means that the same outcome can occur via alternative paths and combinations of conditions, rather than a single condition acting independently on an NGO's influence. The ability of NGOs to influence policy-making and offer solutions to arising issues is not only dependent on material factors; it equally requires non-material factors including the creation of relationships with other actors and strong engagement with ideas, research, and knowledge (Bebington et al., 2008). Hence, in explaining lobbying success, the analysis of the effects of patterns of combinations of lobbying tactics together with organizational resources is crucial (Binderkrantz, 2005; Lowery, 2007). ENGOS' tactics are complementary with material resources and reinforce each other, which is why the logic of combination becomes appropriate (Dür and Mateo, 2016). Nevertheless, with some important exceptions (see, for example, Colli, 2019, 2020; Zhang and Guo, 2020), our knowledge of how these combined factors lead to advocacy success is limited. In other words, the manner in which these conditions interact to generate influence remains poorly understood. This study aims to address that gap by applying QCA to examine the multidimensionality of policy influence.

Third, there is a lack of research on the conditions determining the policy influence of ENGOS beyond the United States and the European Union (Thomas and Hrebentar, 2008; Kanol, 2014). ENGOS' influence might vary across different cultures and political systems, affecting whether they are powerful players in their

own domestic policy-making processes (Bomberg, 2007). The interest group literature has noted the positive impact of Europeanization on both interest group strategies and state institutions in general (Klüver, 2010; Dür and Mateo, 2014; Scaramuzzino and Wennerhag, 2015). Turkey witnessed real transformation after it was recognized as a candidate for EU membership in 1999 due to requirements to bring Turkish national legislation in line with EU law (Kadirbeyoğlu et al., 2017). All sectors of the state, from environmental policy to the judiciary branch, and all segments of the population were affected by those fundamental changes (Ergun, 2010). However, while organizations may conduct peaceful demonstrations to oppose governmental decisions that pose danger for the environment and to inform the public, such demonstrations are reflected in the Turkish press as illegal actions (Balci and Gölçü, 2011). The government takes a hostile view of environmental demands, which it perceives as a form of ideological opposition (Paker et al., 2013). The voices of ENGOS have begun growing in strength together with a comprehensive body of legislation for sustainable development, but there are still limitations to good governance in this regard, reflected in growth-oriented, patronage-based modernization projects that prioritize economic growth at the expense of environmental and social concerns (Mert, 2016; Kadirbeyoğlu et al., 2017). Recently, the declining weight of EU conditionality has also had a negative impact on the promotion of civil rights and environmental policies in Turkey (Bölükbaşı et al., 2018). Although the Europeanization of interest group strategies is beyond the scope of this study, it should be noted that the anti-Western stance of the Turkish government has undermined the positive impact of EU conditionality in terms of participatory democracy and the adaptation of Turkish national legislation in line with EU law. Turkey's Justice and Development Party government has sacrificed environmental quality for the sake of projects that add value and create jobs, often described as sources of patronage-based corruption, which obstruct the application of current legislation in Turkey (Paker et al., 2013). This may prevent ENGOS from becoming actors of opposition and struggle. However, they have not given up working against government policies and development projects that harm the environment, such as mega infrastructure projects, which culminated in the Gezi Park protests that took place against the government across the country in 2013 (Mert, 2016; Eryılmaz, 2018). For all of these reasons, ENGOS in Turkey are expected to be relatively weak players in domestic policy-making processes. They are least likely to shape decisions concerning instrument adoption or use in the field of environmental policy. This makes Turkey an interesting case for shedding light on the effectiveness of ENGOS in policy-making processes by identifying various causal conditions presented in the literature and considering whether certain combinations of those conditions generate more effective advocacy.

This study presents a new dataset on the advocacy activities of ENGOS in Turkey based on a survey conducted in October and November 2019, and fuzzy-set qualitative comparative analysis (fsQCA) is used to capture the combined effect of resources and strategies. The following section presents a literature review and then the main arguments are provided within a relevant theoretical framework. Subsequently, the methodology is explained, including information on measurements, calibration, and results. Finally, the implications of the findings are discussed and conclusions are drawn.

Literature review

A growing body of literature on lobbying for environmental policy is available (e.g., Mazey and Richardson, 2002). According

to Simpson and Smits (2018, p. 1), 'the impact of ENGOs was highly dependent on their strategies, tactics and operation, with community-level projects providing a key route to effect change'. The resource capacity of environmental organizations has a positive impact on their policy targets (Biliouri, 1999). For example, NGOs may dedicate larger amounts of their resources to disseminating information and have expertise in economic, social, or technical areas relevant to sustainable development that decreases the uncertainty of government officials (Lati, 2008; Böhmelt, 2013). At the same time, public support is evident in terms of numbers to legitimate their activities and finances arising from membership fees, as well as donations, constituting a larger portion of the budget (Biliouri, 1999). Amounts of resources and comprehensive lobbying strategies are very closely intertwined, and a lack of the resources needed for effective and rational lobbying may decrease the policy influence of ENGOs (Gullberg, 2008). For example, when ENGOs have professional staff and expertise, they gain opportunities to obtain access to decision-makers and, ultimately, exert influence on them (Böhmelt, 2013). NGOs may also have access to government policy-makers regarding adaptation to climate change as well as close ties with local communities, which could help remove barriers to raising awareness (Lati, 2008). In this regard, many ENGOs prefer to lobby government officials ('inside lobbying') and simultaneously organize awareness campaigns to engender community action in response to climate change ('outside lobbying'). Lobbying is a multilateral operation that requires the involvement of all sides including local and national authorities to ensure full representation of the subject in order to be successful (Biliouri, 1999). Strategically, ENGOs have achieved a good position for negotiating the political dynamics between national and local governments due to their close ties with both local communities and governments (Lati, 2008). In this paper, ENGOs are defined as non-profit interest organizations seeking to promote the intrinsic and priceless value of the environment (Biliouri, 1999; Junk, 2015; Halpin et al., 2020). There is a growing but still limited body of literature on the effectiveness of advocacy efforts of non-profit organizations such as ENGOs outside of the US and EU (Simpson and Smits, 2018). For that reason, this study incorporates the literature on ENGO lobbying and strategies with the literature on interest groups to examine the determinants of the lobbying influence of ENGOs.

The literature shows that there are two important approaches to the determinants of policy influence (Klüver, 2010; Dür and Mateo, 2016). One of these approaches that explains interest groups' levels of influence is focused on resources. According to this approach, success depends on consistent efforts that must be supported by appropriate resources (Hofer, 2000; Eising, 2007; Crombez, 2002). 'Resources' here refers to the budget devoted to advocacy activities¹. It is emphasized in the literature that the allocation of resources to lobbying activities is largely determined by how an ENGO is structured. There are two different views of organizational structures that are largely capable of mobilizing resources for lobbying influence (Levine and White, 1961; Gamson, 1975; Dür, 2008; Coen and Richardson, 2009). One of these views focuses on professionalized organizations measured by the number of paid staff, who in turn have privileged levels of information that should increase their likelihood of influencing policy processes (Reenock and Gerber, 2008). The other view asserts that membership-based organizations with large numbers of members are more likely to achieve advocacy gains (Scaramuzzino and Wennerhag, 2015). Politicians need the support of citizens in their efforts to find political solutions that are favored by a majority of their electorates (Klüver, 2013). In line with the cited literature, one can distinguish legitimacy and representativeness based on strong membership as important determinants

of ENGOs' influence on policy-making (Coen and Richardson, 2009; Dür, 2008; Berry, 2001). It is expected that if ENGOs have strong membership, they will be capable of increasing public awareness (Kollman, 1998) and gaining larger amounts of public support, which may affect policy-makers (Page and Shapiro, 1983).

As described above, these resources are identified in the literature as paid staff size and membership size. Biliouri (1999) examined the success of ENGOs in Brussels and determined that resources constituted an important element of ENGO effectiveness, further noting the ability of professional staff to create technical and scientific knowledge on issues justifying the work of the organization. The availability of professional staff who can commit time to advocacy is important in successfully influencing policies (McCarthy and Zald, 1977; Eising, 2007; Böhmelt, 2013). Lobbying requires the regular monitoring of policies and fieldwork; thus, it is essential that qualified staff are employed.

In addition to manpower, membership size is another important resource that can be used by interest groups. Advocacy groups with higher levels of citizen support are expected to have higher levels of influence in policy-making. Representativeness and legitimacy are currencies that can be used in exchange for accessing and influencing decision-makers (Dür, 2008; Coen and Richardson, 2009). Politicians need citizen support and generally seek solutions to problems that are favoured by a majority of their electorates (Klüver, 2013). It is expected that interest groups with strong membership bases will have more public support, which may positively affect policy-makers' perceptions of the importance of these groups (Page and Shapiro, 1983; Kollman, 1998).

Advocacy success is also determined by an organization's strategies, reflecting the second main approach to influencing environmental policies (Binderkrantz, 2005; Mahoney, 2007). These strategies include lobbying multiple venues as well as using inside and outside lobbying tactics. In particular, employing both inside and outside tactics is another important condition that generates influence. Strategic decisions made by advocacy groups can influence advocacy effectiveness in general and ENGO influence in particular (Allan and Hadden, 2017; Banaszak, 1996; Simpson and Smits, 2018; Zeng et al., 2018). Groups that use inside lobbying seek to achieve influence through interactions with governmental actors by means of advisory boards, consultations, or personal contacts (Beyers, 2004; Böhmelt and Betzold, 2013). On the other hand, groups that use outside lobbying aim to influence policy-makers by mobilizing public opinion through petitions and other manifestations of activism (Kollman, 1998; Dür and Mateo, 2013). Scholars have pointed out that one strategy is not superior to another and they might all be appropriate in different circumstances (Binderkrantz, 2005; Binderkrantz et al., 2014). Different strategies might also be combined by advocacy groups to achieve optimal results, as they are not mutually exclusive. Similarly, Baumgartner and Leech (1998) and Hofer (2000) observed that attempts to gain influence are most effective when they involve multiple tactics. Overall, one can argue that an organization that uses multiple strategies, including both inside and outside lobbying tactics, has better opportunities for influencing policies.

Venue-shopping is another crucial condition among these strategic approaches, entailing the strategic lobbying of different institutions to exert influence (Beyers, 2004; Lati, 2008; Klüver, 2013). Vertical venue-shopping means choosing to lobby among regional, national, and/or international institutions, while horizontal venue-shopping means choosing to lobby among the executive, legislative, and/or judiciary branches and bureaucracy (Princen and Kerremans, 2008). Interest groups may 'shop around' for the venues that offer the highest returns on their

investments or to reduce risk through diversification (Baumgartner and Jones, 2010; Ley and Weber, 2015). Multiple venues provide opportunities for interest groups to exert influence through alternative channels. Therefore, one can argue that venue-shopping increases the number of access points for interest groups, which can increase their opportunities to exert influence in turn.

Theoretical framework of the determinants of policy influence

The literature reviewed above clearly shows the diversity of conditions experienced by ENGOs and suggests that interest group influence is multidimensional. In line with the literature, resources (Eising, 2007; Dür and Mateo, 2016), tactics, and venue-shopping (Bouwen, 2004; Beyers, 2004; Binderkrantz et al., 2014) are recognized as core variables significantly associated with policy influence. This multidimensionality of interest group influence cannot be explained by a single causal condition (Zhang and Guo, 2020). However, according to many scholars, the models used in most quantitative studies of interest group influence fail to capture the essence of the nature of lobbying, as many important variables are omitted from the majority of studies on this subject (Baumgartner and Leech, 1998; Lowery et al., 2012; Halpin and Jordan, 2012). To address this limitation, scholars have started to incorporate various new interactive models to replace simple one-way models and empirical analysis of a single condition (Scott, 2005; Lowery, 2007). Casey (2004) and Fiss (2007) stated that the configurational framework has become a central feature of studies of advocacy effectiveness, suggesting that multiple factors work together to determine policy influence. The need for an integrative framework that combines multiple dimensions and conditions has thus become clear. For instance, Colli (2019) measured configurations of strategies to examine how NGOs combine their actions towards companies and the state. That study showed that NGOs combine different tactical decisions that relate to each other to influence policy-making. In addition, Zhang and Guo (2020) analyzed 123 'institutions of a public character', a type of NGO that carries out charitable activities in Singapore, and they found that advocacy effectiveness could be explained by a combination of different conditions that could be grouped under the headings of resources and capacity, environment, and tactics.

In the interest group literature, lobbying behavior is described as being driven by multiple conditions and contexts (Hunter et al., 1991; Heaney, 2004; Lowery, 2007), and scholars have begun to emphasize that various interdependent factors together make a difference in the ways in which policy is influenced (Colli, 2019, 2020; Zhang and Guo, 2020). In other words, combinations of different conditions and alternative paths may produce the same outcome. However, there is no information in the literature on how environmental organizations in Turkey interactively use multiple conditions of strategies and resources together to gain environmental policy influence. This paper, therefore, argues that, for a high level of policy influence, an ENGO should have appropriate resources and use multiple different strategies together. Resources (large number of paid staff, large membership size) and strategies (inside and outside lobbying, multiple venue-shopping) are both important, and they mutually reinforce each other on the path to influence. Therefore, it is expected that ENGOs will only have high levels of influence if they combine their resources with strategies. With this in mind, the following hypothesis is proposed: The combination of large staff size and large membership size with the use of both inside and outside lobbying and lobbying multiple venues leads to high ENGO influence.

Methods

Although research regarding the relationship between the state and civil society has been conducted in the Turkish context (Paker et al., 2013; Keyman and Icduygu, 2003), ENGOs have yet to be investigated in the interest group literature. ENGOs in Turkey work under the umbrella of a variety of organizations including associations, foundations, internet platforms, university clubs, and citizens' initiatives (Paker and Baykan, 2008). The present study focuses exclusively on organizations primarily dedicated to environmental aims. The database of the Civil Society Development Centre (Turkish acronym: STGM) is the only comprehensive database available and accessible online for Turkish civil society organizations. This study accordingly obtained information about the ENGOs of Turkey from the STGM database. A total of 754 civil society organizations are included under the heading of 'Area of Activity: Environment' on that website and they are dedicated to a variety of different issues. When the database is examined more carefully, some organizations are seen to be listed 2 or 3 times in different categories or with different names, such as the Environmental Volunteers Association, Environmental Protection Association, and Environmental Friends Association. The Turkish Foundation for Combating Soil Erosion (TEMA) appears more than 20 times with its different representations. Another problem is that some unrelated organizations, such as the Kombassan Foundation and United Infrastructure Contractors Association, are listed under environmental headings (Aygun and Sakacı, 2007). For these reasons, each organization listed within 'Area of Activity: Environment' was investigated and analyzed individually in order to confirm its specific area of interest parallel to the conceptualization of ENGOs as interest groups with a primary focus on the environment (Aygun and Sakacı, 2007; Doyle et al., 2015). After reviewing their vision and mission statements by examining their websites and visiting their Facebook and Twitter pages, 81 ENGOs with primary interests in and associations with the environment were determined. To ensure that no organizations were missed, respondents were asked to provide the names of three other organizations that are primarily active in the environmental field. The answers of the respondents proved that the ENGO list that was generated was 97% correct. There were only three additional organizations that were not included in the STGM database and they were subsequently added. Those were the Çevreci Enerji Derneği (CED), Doğal Denge Derneği, and EKİNOKS, which are all actively involved in environmental issues as their primary area of interest. Ultimately, a target population of 84 ENGOs was identified as organizations that are primarily dedicated to environmental aims in Turkey.

This study was conducted with survey methodology for the aim of examining ENGOs' influence with the creation of an original dataset in 2019. The advantage of survey methodology is that it allows the collection of data about the characteristics of ENGOs while also enabling examination of the influence of a broad set of ENGOs (Tallberg et al., 2018). This approach was based on a survey of perceptions held by ENGOs and the value that they attributed to their influence. However, the subjective measurement of influence may entail problems of measurement error (March, 1955). The possibility of high variation in subjective values with the over- or underestimation of influence in the survey responses also exists. For example, the evaluation of policy influence may not be consistent across participants due to different levels of personal knowledge, experience, and social desirability. However, the questionnaires were administered to individuals in comparable positions with the most extensive knowledge about the objectives of the organizations' projects, namely managers or executive directors of ENGOs across Turkey. Group leaders as respondents are expected to give more valid and

reliably comparable answers (Dür, 2008; Tallberg et al., 2018). To further reduce non-response bias, all 84 ENGOs selected based on the STGM list were investigated by visiting their social media accounts or websites individually and their vision and mission statements were checked to ensure that they were all actively involved in environmental issues. In this way, the social media or internet presence of all 84 ENGOs in the dataset was used to confirm their ability to respond to the questionnaire while also eliminating systematic differences between responses and non-responses (Jordan and Troth, 2019). In order to increase the probability of a high response rate after obtaining ethical approval from the ethics committee of the author's university, the survey was sent to the organizations by email with a description of the aims of the project, how the information would be used, and how it would benefit the organizations. Ultimately, a total of 38 responses were received from the overall population of 84 ENGOs across Turkey, putting the response rate at about 46%. This response rate is high in comparison to other similar studies in the field, such as the response rates of 30% reported by Chalmers (2013) and 40.7% by Dür and Mateo (2013). An additional aim of creating a reliable dataset and achieving a large response rate was to overcome the subjectivity problem.

Questionnaire measurements. The outcome variable of this study is the policy influence of ENGOs. Influence is defined here 'as an actor's ability to shape a decision in line with his/her preferences' (Dür, 2008, p. 561). However, the lack of a common definition of influence in the literature has led to the emergence of difficulties in measuring it. Dür (2008) focused on 'attributed influence' to measure interest group influence with the aim of overcoming methodological problems. Although a long-running discussion about the objective and subjective measurement of advocacy influence arose, objective measures are widely viewed as inappropriate in assessing influence in the case of various goals, subjective outcomes, and multiple stakeholders commonly seen among non-profit organizations like ENGOs (Herman and Renz, 1998; Mitchell and Schmitz, 2019). Scholars have similarly emphasized that the evaluation of interest group influence is a form of judgment and performance measures (Brewer, 2006), because it is based on the assessment of various factors such as the politics affecting the issues and organizational quality, which are best evaluated by leaders as they have the greatest understanding of their organizations and advocacy activities. One of the advantages of perception-based indicators is that respondents who are asked to evaluate influence are likely to give an estimate that takes into account all channels of influence related to unobserved events (Dür, 2008). The concept of attributed influence can be applied to a wide number of cases, based on either the self-evaluation of interest groups or the assessments of experts (e.g., Dür and De Bièvre, 2007; Dür, 2008). Consistent with the abovementioned literature, the present study is based on a survey of perceptions held by ENGOs by directly asking them whether they perceive themselves to be influential in affecting environmental policy. The outcome, ENGOs' influence, is derived from answers to the question of 'How influential is your organization in affecting environmental policy?', to which respondents could answer 'Not at all', 'Not very', 'Somewhat', or 'Very'. These answers were respectively coded from 0 ('Not at all') to 3 ('Very').

Four causal conditions were used to measure the groups' capacities to lobby successfully in order to influence policy processes. In line with previous research, staff size was the first considered condition, operationalized by the number of paid staff (Dür and Mateo, 2014). Participants were asked 'How many full-time and part-time employed staff members does your organization have?' Following Scaramuzzino and Wennerhag (2015), paid

staff size was measured by the number of employees, converting part-time employees into full-time equivalents (i.e., two half-time employees counted as one full-time employee) and adding that number to the number of full-time employees. Again following Scaramuzzino and Wennerhag (2015), membership size as the second condition was measured by asking 'How many members does your organization have?'

The third condition, inside and outside lobbying tactics, was operationalized by presenting the combined lists of lobbying strategies of Kriesi et al. (2007) and Binderkrantz (2005). According to their lists, inside lobbying strategies include participating in governmental consultation procedures, supplying information to policy-makers, and having personal contact with politicians, bureaucrats, members of governments, and public officials via face-to-face communications or phone calls. Outside lobbying strategies include writing newspaper articles, arranging public meetings and conferences, organizing letter-writing campaigns in newspapers, arranging protests or public demonstrations, circulating petitions, and using social media platforms. After this combined list was presented and explained to the participants, inside/outside lobbying strategies were measured by asking 'Can you please state which strategies your organization uses to influence environmental policy?' Respondents could reply with 'inside lobbying strategies', which was coded as 0; 'outside lobbying strategies', which was coded as 1; or 'both strategies', which was coded as 2. It is beyond the scope and aim of this work to evaluate the specific inside and outside tactics used by these ENGOs, and recent studies have indicated that NGOs generally use multiple strategies to achieve their aims (Hofer, 2000). Hence, the use of multiple strategies emerges as a determinant of high levels of policy influence among interest groups and advocacy studies. In line with the theoretical argument, the full list of 13 inside and outside tactics was provided to the participants in the questionnaire and they were asked to state whether they used both types of strategies or only inside or outside tactics. The aim here was to observe whether the ENGOs preferred to use both inside and outside strategies as multiple strategies or only one of the two types tactics in their efforts to gain policy influence. It was expected that ENGOs would use both inside and outside strategies together as multiple strategies to gain influence. Hence, those ENGOs that used both types of strategies were finally coded as 1 and otherwise as 0.

For the fourth condition of venue-shopping, the aim was to understand whether the groups' contacts with different actors at different levels could be an independent variable explaining these ENGOs' policy influence. In line with the work of Baumgartner and Leech (1998), venue-shopping was defined as the number of 'contacts' at different levels and it was measured by examining the interactions of ENGOs with domestic actors in different venues (Holyoke et al., 2012). Venues were considered as follows: the 'national executive branch', 'national bureaucracy', 'legislature', 'the courts', and 'local government'. Respondents could select all 5 venues or fewer. Based on this classification, they were asked whether they contacted different types of venues with the question 'Which of the following venues does your organization contact?' Respondents were expected to answer 'Yes' or 'No' for each type, and depending on the number of 'Yes' and 'No' responses, answers were counted and coded from 0 (lobbying none of them) to 5 (lobbying all 5 types of venues).

Fuzzy-set qualitative comparative analysis and calibration. The raw data obtained from the questionnaires were analyzed using fsQCA. In this study, the influence of ENGOs is examined in light of multiple causal conditions that are interrelated, namely resources and strategies. Hence, fsQCA is the most suitable

method for this research because QCA's conception of causality based on equifinality and causal complexities centers on a joint causal system that takes into consideration interactions between each characteristic within a case (Ragin, 2008a). 'Equifinal' means that different conditions or combinations of conditions can lead to the same outcome. On the other hand, 'causal complexity' means that outcomes are not caused by single variables acting alone but rather by combinations of conditions together (Fitzgerald, 2019). In other words, QCA allows researchers to capture combinations of multiple conditions and the degree to which groups use each combination of conditions (Colli, 2019).

Two types of QCA are commonly used: crisp-set QCA (csQCA) and fuzzy-set QCA (fsQCA) (Fitzgerald, 2019). In csQCA, conditions are coded as binaries and given a value of 1 for full set membership and a value of 0 if it is not fully within the set (Longest and Vaisey, 2008). However, fsQCA allows researchers to examine both crisp sets and fuzzy sets by also giving a value to the gray area of cases that are neither fully in nor fully out of a set (Fitzgerald, 2019). To determine the cases' set membership for policy influence, fsQCA requires the transformation of all ratio, ordinal, and interval-scale variables into fuzzy-set membership scores through calibration ranging from 0 (full non-membership) to 1 (full membership), where 0.5 represents the crossover point of cases that are neither fully in nor fully out of the set (Ragin, 2008a). Hence, a direct method was used in this study to convert raw data to data with fuzzy scores based on researcher-specified benchmarks for full membership (0.95), full non-membership (0.05), and the crossover point (0.5) as described by Ragin (2008a). Qualitative anchors and the degree of membership in a set need to be based on the researcher's theoretical and substantive knowledge (Ragin, 2008a). However, in some cases, theoretical or substantive knowledge that could offer standards for anchors in calibration is lacking. This is one of the challenges faced in the QCA method during the stage of determining the threshold (Ragin, 2008b). Under this condition, as an alternative route, scholars may sample distribution characteristics as thresholds to calibrate sets (Verkuilen, 2005). Hence, in line with the literature, the present study relied on survey responses as well as the cumulative data distribution scores of the sample to some extent to calibrate the raw data. The 5th percentile, 50th percentile, and 95th percentile, or those closest to these percentiles as available from the cumulative distribution function, were used to code full non-membership, the crossover point, and full membership. The 'fuzzy' package of Stata, developed by Longest and Vaisey (2008), was used for hypothesis testing (Fitzgerald, 2019).

After calculating raw scores based on the answers to the questionnaire and entering those scores into the Stata program, fsQCA was conducted to sort the ENGOs according to their different resource- and strategy-based characteristics. Perception-based indicators may provide a more accurate representation of high policy influence as the outcome variable, which was derived from answers to the question of 'How influential is your organization in affecting environmental policy?' In response, participants could rate their overall impact by answering 'Not at all', 'Not very', 'Somewhat', or 'Very'. These answers were coded from 0 ('Not at all') to 3 ('Very'). A 3-value fuzzy-set scale was applied in this study as an appropriate approach, since previous research found these values to be better associated with the concept of high or completely effective advocacy (Ragin, 2008a; Zhang and Guo, 2020). In the fuzzy set of ENGOs with high policy influence, membership was coded as fully in (0.95) for ENGOs with a response of 3 ('Very influential') and as fully out (0.05) for those with a response of 0 ('Not at all'). The middle-ground response (0.5), indicating ENGOs that are neither fully in nor fully out of the set, was coded as 1.2. This middle ground

(0.5) was coded higher than responses of 'Not very influential' to highlight the concept of high policy influence better.

Large paid staff size is the first condition expected to improve advocacy success. However, in some cases, the theoretical or substantive knowledge that could offer meaningful standards for anchors in calibration is lacking. As an alternative approach, following Verkuilen (2005) and Zhang and Guo (2020), this research applied the cumulative distribution using the 5th percentile, 50th percentile, and 95th percentile to code full non-membership, the crossover point, and full membership. Accordingly, the direct calibration scores for large staff size were as follows: fully in for organizations with 17 paid staff members (94th percentile), with the 0.5 crossover point set as 1 paid staff member (54th percentile), and fully out for organizations with 0 paid staff members (32nd percentile). The second causal condition of resources was large membership size. Again, using the cumulative data distribution function, this was calibrated as follows: fully in for organizations with 3415 members (94th percentile) and fully out with 0 members (7th percentile). The crossover point for a large membership base was set as 56 (50th percentile).

The third condition of using both inside and outside lobbying strategies constituted a crisp set measured as a dummy variable. In light of the literature review, it was assumed in this study that ENGOs would use both inside and outside strategies at the same time in their activities to achieve their objectives of policy influence. Thus, all respondents who reported the use of both inside and outside lobbying strategies were coded as fully in (1), and all others were coded as fully out (0).

With the fourth condition, which was multiple venue-shopping, the aim was to understand whether the groups' contacts with different actors in various venues could be another factor explaining the ENGOs' policy influence. The direct method of calibration was used to convert raw data to data with fuzzy-set scores for the condition of multiple venue-shopping. Using the cumulative data distribution function, organizations with a response of lobbying all 5 venue types were coded as fully in (100th percentile), and those that reported lobbying none of the venues were coded as fully out (2nd percentile). The crossover point was set at 2 (lobbying two venues; 60th percentile), representing organizations that were neither in nor out. The next percentile rank was the 31st. Hence, it was decided to choose the 60th percentile in this research as it was closer to the middle point of 50%. A summary of the analytical model is displayed in Table 1.

Results

This section aims to show how ENGOs influence policy-making processes via different pathways. The results are evaluated using tables of measures such as consistency and coverage scores (Ragin, 2008a). Consistency indicates how closely a perfect subset relation is approximated, while coverage indicates only the empirical relevance or importance of a set-theoretic connection (Ragin, 2008a). It is important to note that coverage is only interpreted for consistent results. Table S1 shows the fuzzy-set scores for the outcome and the four conditions, ranging from 0 (full non-membership) to 1 (full membership), in Appendix A.

Before discussing the findings, it is important to note that the results are presented in equation form using letters as abbreviations for the conditions that represent different sets in the analysis as well as the outcome. In this regard, 'I' represents the outcome of a high level of influence, while causal condition 'S' represents a large number of paid staff, 'M' denotes a large membership base, 'B' refers to the use of both inside and outside lobbying strategies, and 'V' signifies lobbying multiple venues. The fuzzy-set

Table 1 Summary of the analytical model.

Outcome	Abbrev.	Measurement	Crisp and fuzzy values	Obs.
Influence	I	Scale of policy influence	3 = fully in (=0.95) 1.2 = crossover (=0.5) 0 = fully out (=0.05)	38
Conditions				
Large staff	S	Number of paid staff	17 = fully in (=0.95) 1 = crossover (=0.5) 0 = fully out (=0.05)	38
Large membership	M	Number of members	3415 = fully in (=0.95) 56 = crossover (=0.5) 0 = fully out (=0.05)	38
Both strategies	B	Multiple tactics	1 = Both inside and outside tactics (fully in) 0 = Otherwise (fully out)	38
Multiple venues	V	Number of venues	5 = fully in (=0.95) 2 = crossover (=0.5) 0 = fully out (=0.05)	38

Table 2 Truth table for policy influence.

Configuration	S	M	V	B	I	Number	yconsist
1	0	1	1	1	1	2	0.935
2	1	0	1	1	1	4	0.972
3	1	1	1	1	1	5	0.960

Only configurations with a consistency score significantly higher than 0.85 are included. A value of 1 indicates being in the set and 0 indicates being out of the set.

approach deals with causal complexity through the identification of necessary and sufficient conditions (Fitzgerald, 2019). Scholars recommend that conditions only be considered necessary if their consistency scores are very high (Schneider and Wagemann, 2007; Ragin, 2008a; Emmenegger, 2011). A necessary condition ‘occurs when the scores of a condition are consistently higher than the scores of the outcome’ (Fitzgerald, 2019, p. 5). Following Schneider and Wagemann (2007), this article uses 0.85 as a threshold to consider conditions to be necessary. Since Stata allows truth tables to be restricted to only those configurations that are significantly higher than 0.85 ($p < 0.05$), it can perform necessity analysis to examine the extent to which the outcome is a subset of the condition or set of conditions (Fitzgerald, 2019). In this case, the results of the truth table (Table 2) show that there are no single necessary conditions that have a consistency level of at least 0.85.

Regarding the analysis of sufficiency, Ragin (2008a) recommended that the consistency threshold be 0.75 or higher. Sufficiency analysis is applied to identify a condition or combination of conditions that can produce a certain outcome (Ragin, 1987).

In this study, the consistency threshold of yconsist was set to a value of ≥ 0.85 . These tests reveal each configuration’s degree of inclusion with the given outcome. Only the configurations that pass all of the tests and specified conditions are displayed. The hypothesis that emerged from literature review states that having resources (large staff and membership base) and using multiple lobbying tactics in multiple venues leads to high levels of policy influence. Analyzing sufficiency requires truth table reduction and each reduced solution has consistency and coverage scores (Fitzgerald, 2019). The fuzzy-set algorithm is used to reduce this complex expression, whereby the configurations are reduced to the smallest possible number of causal conditions. ‘Minimum Configuration Reduction Set’ displays the reduced configurations from the initial steps. Table S2, which shows the detailed

Table 3 Analysis of sufficient conditions for the outcome of policy influence.

Solution	M*V*B	+	S*V*B
ENGO coverage	WWF-TÜRKIYE (26) EKODOSD (36)		TROYA ÇEVRE (24) ANTOK (4) KUZEYDOĞA (18) EKİNOKS (12)
Consistency	0.928		0.971
Raw coverage	0.397		0.409
Unique coverage	0.104		0.116
Total solution consistency	0.943		
Total coverage	0.513		

The consistency threshold (yconsist) was set at 0.85. Uppercase letters indicate set membership and lowercase letters indicate not being in a set. M = large membership; V = multiple venues; B = both inside and outside strategies; S = large staff. Cases for which both paths are relevant are AKDENİZ KORUMA (2), SAD (21), TEMA (22) BUĞDAY (34), and YEŞİL DÜŞÜNCE (29).

sufficiency analysis as well as the truth table, is presented in Appendix A.

Thus, the three initial configurations in the truth table were collapsed into two configurations, which are reported in Table 3 together with the consistency and coverage scores. In this case, the ‘Final Reduction Set’, which resulted from the second step employing the Quine–McCluskey algorithm, differs from the initial configuration (Longest and Vaisey, 2008). Hence, the results reveal two pathways for the outcome of policy influence, as displayed in Table 3. Truth table reduction resulted in two different solutions for environmental policy influence. In other words, there are multiple pathways to policy influence, indicating equifinality and causal complexity.

The first configuration, M*V*B, encompasses ENGOs that combine a large membership base (M) with the use of both inside and outside lobbying (B) of multiple venues (V). This configuration specifically includes two ENGOs: WWF-Türkiye (26) and EKODOSD (36). M*V*B constitutes the joint causal conditions for achieving high policy influence with a solution consistency score of 0.928 and raw coverage score of 0.397 (see Table 3). Coverage indicates how much of the outcome (i.e., policy influence) is covered by the combination of the considered conditions (i.e., large membership base, multiple venues, inside/outside strategies) (Reynaert, 2011). The combination of these conditions accounts for about 39% of membership in the outcome. This also

reveals an interesting relationship between the independent conditions as none of the conditions are sufficient for influencing policy alone. Rather, a high level of policy influence can be expected for ENGOs characterized by having a large membership base (M), using both inside and outside lobbying strategies (B), and lobbying multiple venues (V). This clearly shows that conjunctural causation brings about policy influence and M^*V^*B exists as a sufficient combination of conditions for the outcome of high policy influence.

The second pathway, S^*V^*B , encompasses ENGOs that have large staff sizes and lobby multiple venues in combination with the use of both inside and outside lobbying tactics. This solution has a consistency score of 0.971, accounting for about 41% of the total number of cases. In other words, if ENGOs have a large number of paid staff (S), lobby different venues (V), and use both inside and outside lobbying strategies (B), they will have high levels of policy influence. S^*V^*B includes ANTOK (4), TROYA ÇEVRE (24), KUZEYDOĞA (18), and EKİNOKS (12). There are also 5 cases for which both paths are relevant: AKDENİZ KORUMA (2), SAD (21), TEMA (22), BUĞDAY (34), and YEŞİL DÜŞÜNCE (29). Table 3 displays the coverage values for both combinations of conditions ($M^*V^*B + S^*V^*B$), which account for about 51% of membership in the outcome of policy influence, and the consistency of the solution is 0.943.

These causal conditions bring about influence together. The obtained solutions are consistent with those of previous studies, which found that resources (Eising, 2007; Dür and Mateo, 2016), tactics, and venue-shopping (Bouwen, 2004; Beyers, 2004; Binderkrantz et al., 2014) are core variables significantly associated with policy influence. Bouwen (2004) and Eising (2007) analyzed lobbying strategies with regard to their potential for gaining access to policy-makers. However, applying a net-effect approach, these previous studies evaluated these variables as isolated conditions. This means that only their additive or net-effect impacts on policy influence were identified. These studies did not explore multidimensionality or the combinatory impact of these conditions on policy influence. The methodology of the present study overcomes the limitations of that linear, net-effect approach by introducing a set-theoretic fsQCA approach.

Discussion and conclusion

The findings presented above indicate that neither resources nor strategies can independently explain why some ENGOs are highly influential and others are not. Instead, the joint effect of resources and appropriate strategies can explain the policy influence of ENGOs in Turkey. The geographical locations of ENGOs and the political and cultural structures of host countries determine the activities that can be undertaken by these organizations (Bomberg, 2007; Simpson and Smits, 2018). In the case of Turkey, the priority is not the protection of nature; it is the loss of nature as a source of income (Paker et al., 2013). Turkey's economic growth and social transformation have inevitably exacerbated environmental degradation, and the declining weight of EU conditionality is expected to further undermine ENGOs' dialogs with policy-makers and the effectiveness of environmental policy and practice. On the other hand, ENGOs have become particularly active and influential NGOs in Turkey, and they perform increasingly important roles in advocating environmental policies via multiple causal pathways. Having a conscious public in addition to a conscious government has been one of the most important challenges faced while dealing with environmental issues in non-European countries (Kim, 1999; Jha 2004). Similarly, ENGOs in Turkey describe how the general public is minimally informed about the dramatic destruction of natural resources, and they address this obstacle by employing multiple

tactics. For example, the Turkish Foundation for Combating Soil Erosion (TEMA), which focuses on reforestation and the protection of natural habitats, carries out its actions with a relatively large number of professional staff employing multiple tactics and activities that include the following as stated on the organization's website: pasture and soil laws have been introduced in Turkey; more than 4 million children have been reached to date with education on nature and awareness; 266 rural development, protection, and forestation projects have been conducted; and approximately 70% of the more than 250 cases filed for the protection of nature and natural assets to date have concluded favorably (TEMA, 2020). An analysis of TEMA press releases in 2015 further revealed that 9 of those press releases addressed demonstrations and public opinion activities such as amplifying the lawsuit filed against the 'Green Road Project' in the media and organizing environmental protests against a mining project in Artvin. The other 30 included information on climate change issues and other relevant events.

The activities of the Troya Environment Association (Troya Çevre), which was established to work on climate change and its effects at both local and national levels, have focused on climate and energy issues. When the website of this organization was investigated, a total of 21 projects, at least 11 publications, and many activities were identified. The activities have included organizing and attending national and international conferences and preparing and sharing a report about environmental issues with the relevant municipality, the Provincial Directorate of Environment and Urbanization, the Special Provincial Administration, and the public. Two publications from 2019 on the organization's website provide information on climate change issues such as renewable energy use in cities and agricultural cooperatives facing the effects of the changing climate. For this organization, it is seen that the combination of informing the public and simultaneously maintaining direct contact with politicians in different venues and supplying information to bureaucrats is preferred (Troya, 2020).

The objective of WWF-Türkiye as an environmental organization is stated on its website as follows: the creation of concrete nature protection solutions taking into account the combination of field projects, political initiatives, capacity building, and training activities. This organization involves local people and communities in the planning and execution of field programs while taking into account their cultural and economic needs (WWF-Türkiye, 2020). WWF-Türkiye carries out its lobbying activities with a large number of members, which bestows legitimacy upon the organization, while at the same time contacting policy-makers and mobilizing local stakeholders to fight against coal-fired power plants. The advantageous position of this organization in terms of its large membership base should be combined with the tactical use of inside and outside lobbying strategies to make its efforts more successful. These results show that resources and strategies work in tandem and scoring highly for either resources or strategies alone is insufficient for achieving significant influence on environmental policy. Furthermore, there is no single way of achieving policy influence. Two alternative pathways exist that can produce the same outcome of a high level of policy influence. A combination of a large number of paid staff and lobbying multiple venues using both inside lobbying and outside lobbying tactics or a combination of a large membership base with the use of both inside and outside lobbying of multiple venues is required to exert strong influence on environmental policy processes in Turkey. The fsQCA results showed that there are alternative paths to the same outcome of policy influence.

The first of those two pathways, encompassing WWF-Türkiye (26) and EKODOSD (36), shows that lobbying multiple venues provides the opportunity for ENGOs to exert influence through

alternative channels of lobbying; however, that alone is not sufficient for policy influence. The degree of venue accessibility (V) only causes policy influence in combination with the use of inside/outside strategies (B) as well as a large membership base (M). The second pathway, which encompasses ANTOK (4), TROYA ÇEVRE (24), KUZEYDOĞA (18), and EKİNOKS (12), shows that having a large number of paid staff (S) provides advantages for ENGOs to exert influence through their qualified staff members, but that alone is not sufficient for policy influence. In other words, having paid staff members only provides an advantage for groups to influence policy processes in combination with the use of inside/outside lobbying strategies (B) for multiple different venues (V). Hence, none of the conditions emerge alone as being sufficient for reaching the outcome. These findings support the theory that multiple tactics in combination with large numbers of staff or members are required to be influential.

Some organizations evaluated in this study have no paid or professional staff. For example, EKODOSD and WWF-Türkiye have few or no professional staff members and achieve their mobilization and political activities based largely on membership capacity. This finding shows that while professional staff members increase the accessibility of politicians with their technical knowledge in combination with other strategies, organizations with large membership bases obtain this access through their representative capacity in combination with other strategies. One common finding in the literature on lobbying influence is that resources are essential determinants for influencing policy and policy-makers. However, organizations are generally not positioned to be able to possess all the resources they need, including budgets, networks, professional staff members, and volunteers (Levine and White, 1961; Gullberg, 2008). Similar to previous research, the present study shows that ENGOs deriving power from large membership bases have wider public support for forcing policy-makers towards policy changes and increasing public awareness at the same time (Page and Shapiro, 1983; Kollman, 1998). The present results accordingly reveal the multidimensionality of an organization's success depending on having large numbers of either paid staff or members in combination with lobbying strategies.

These findings speak to the general trends in the literature on advocacy group influence. Although a number of scholars have concluded that the influence of advocacy groups cannot be explained by a single variable (Heaney, 2004; Lowery et al., 2012; Halpin and Jordan, 2012), minimal attention has been given to how different conditions together create influence. Furthermore, these studies have not explored the multidimensionality or the combinatory impact of these conditions on policy influence. The present study argues that advocacy groups in Turkey can best assert influence on governmental actors if resources and strategies are used together in combination, supporting the argument that it is the combined effect of resources and strategies that leads to advocacy group influence. Furthermore, there is not just one route to success; there are alternative routes to the same outcome of policy influence. In the case of Turkey, influence may be gained by following different pathways such as M^*V^*B and S^*V^*B .

These results also contribute to the ENGO literature with a comparison of which types of ENGOs are more influential than others. Similar to authors who have studied the different strategies available to ENGOs (e.g., Ayana et al., 2018; Dai and Spires, 2018; Simpson and Smits, 2018; Zeng et al., 2018), this paper has shown that these results have not only theoretical but also practical implications, pointing towards a formula for success for ENGOs that strive towards policy change. ENGO lobbying activities revealed that both inside and outside strategies were perceived by ENGO leaders as effective. Similarly, the data retrieved from these ENGOs' websites showed that they not only

lobby politicians to influence decision-making but also lobby the public or educate mass audiences. Overall, with this strategy of combining public campaigns and direct lobbying, ENGOs aim to bring larger audiences onboard by increasing public consciousness as well as managing their relationships with the state. Although the present study did not aim to identify which specific combinations of inside and outside lobbying strategies are required for gaining policy influence, it has been shown that ENGOs in Turkey are capable of using multiple strategies including addressing the public consciousness and maintaining direct contact with politicians. Future studies could investigate which specific inside and outside lobbying strategies should be combined to have more impact. They could also consider which venues should be targeted at the same time and if there are different combinations of venues that could be targeted for advocacy activities to be effective. Future research on advocacy effectiveness should also evaluate combinations of conditions beyond those studied in this work, such as coalitions or network conditions.

On the methodological side, this study has shown the potential of comparative configurational methods in research on advocacy groups (see Colli, 2020). As seen here, fsQCA is useful for observing whether a single condition is sufficient or a combination of multiple conditions is required to achieve influence. In contrast to regression analysis, QCA's conception of causality is based on equifinality and causal complexity. Hence, it provides the opportunity to identify surprising relationships between different conditions that lead to positive outcomes. Although these research findings are not representative of all NGOs and may not be generalizable beyond Turkey, they still shed light on common perceptions of non-profit environmental organizations using multiple combinations of conditions to achieve policy influence. Specifically, the results revealed that alternative paths can produce the same outcome by using a configurational approach inherently characterized by multidimensionality and causal complexity. This study has overcome the limitations of linear, net-effect approaches by applying a set-theoretic fsQCA approach. Set-theoretic fsQCA expands our understanding of how the determinants of lobbying processes intersect. Future research on advocacy effectiveness should address combinations of conditions other than those studied in this work, and this type of methodological approach can be used to study all types of non-profit organizations' advocacy effectiveness, including business associations, trade unions, and professional associations.

Utilizing policy influence as an outcome built on single-item measures is one of the limitations of this study. The main objective of this research was to determine policy influence based on complex causality. In other words, multiple conditions were conjuncturally and equifinally expected to create policy influence. In line with its main aim, this study measured the outcome of policy influence from a single survey question by employing the configurational approach of QCA, which requires a single outcome measure, similarly to other studies in the literature (Zhang and Guo, 2020). Although this approach is coherent and justified in light of the approaches of other policy influence studies, a perception-based indicator evaluated with a single survey question may suffer from the problem of common method bias (Podsakoff et al., 2012). Recently in the advocacy literature, scholars have been calling for multiple performance measures of organizational influence (Dart, 2010). Configurational analysis of policy influence may incorporate multidimensional indexes of influence as composite indicators in the future. However, such multidimensional indexes have their own limitations based on the lack of consensus regarding the weighting of different indicators (Cherchye et al., 2007). Secondary data from the websites and other documents of these organizations, as well as expert judgments from ENGO leaders, were reviewed to address the issue of

bias arising from a single survey question and enrich the overall results. Table S4 in Appendix A shows the cross judgments of these ENGOs' leaders.

Data availability

All data generated or analyzed during this study are included in this article and its supplementary information files.

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Note

1 'Resources' here does not refer to an organization's total assets but rather specifically to those devoted to advocacy activities. Most participants who completed the questionnaire preferred not to answer any questions directly related to the total budget of the organization, and that information was omitted from the analysis to avoid any problems of reliability.

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Competing interests

The author declares no competing interests.

Ethical approval

The Scientific Research Ethics Committee of Near East University approved the questionnaire and methodology for this study (YDÜ/SB/2019/534).

Informed consent

Written informed consent was obtained from all participants. All respondents consented to participate in the study and have their data published in a journal article after agreeing to complete the questionnaire.

Additional information

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